

CAMPBELL, ROGERS & BLAIR, PLLC

ATTORNEYS AT LAW
154 FLEMINGSBURG ROAD
MOREHEAD, KENTUCKY 40351

MICHAEL R. CAMPBELL
EARL ROGERS III
DONALD E. BLAIR II

(606) 783-1012
Fax (606) 784-8926

12 April 2004

Mr. Thomas Dorman
Executive Director
Public Service Commission Case 2004-00143
P. O. Box 615
Frankfort, KY 40602

RECEIVED

APR 21 2004

PUBLIC SERVICE
COMMISSION

Re: Bath County Water District - Public Service Commission
Application for the Water System Expansion Project,
Contract No. 2;, Tobacco Development Phase

Dear Mr. Dorman:

Enclosed please find the original and ten (10) copies of the Application of the Bath County Water District for a Certificate of Public Convenience and Necessity to construct a waterworks improvement project pursuant to KRS Chapter 278.

Also enclosed are eleven (11) copies of the required exhibits and two (2) copies of the plans and specifications, as prepared by Tetra Tech, Inc., the engineers for the District.

If you need any additional information or documentation, please let us know.

Sincerely,



Earl Rogers III
Attorney at Law

msa

enclosures

c: file

Jeanette Walton, Manager, BCWD
Jim Thompson, Project Manager,
Tetra Tech, Inc.

contains project maps and certified bid tabulations are attached as **Exhibit "B"**;

10. The following information is provided in response to 807 KAR 5:001 Section (8)(3);

a. Articles of Incorporation – None, the District is a statutorily created water district under KRS Chapter 74;

11. The following information is supplied to 807 KAR 5:001 Section (9)(2);

a. Facts relied upon to show that the project is in the public interest: The residents of the area to be served presently rely on cisterns for their water supply. This project will provide water service to approximately 129 residents in Bath County.

b. No new franchises are required. Copies of the necessary permits are attached hereto as **"Exhibit "C"**;

c. Diagrams of the proposed construction and construction specifications are contained in the Plans and Specifications on file with the Commission;

d. Three (3) maps of suitable scale showing the location of the proposed facilities are filed with this Application;

e. The construction costs will be funded by Tobacco Development funds. The District is not borrowing any funds in connection with the project;

f. The estimated cost of operation of the system after construction is completed is attached hereto as **"Exhibit D"**.

WHEREFORE, the Applicant, Bath County Water District requests that the Public Service Commission of Kentucky grant to the Applicant a Certificate of Public Convenience and Necessity permitting the Applicant to construct the Water System Expansion Project – Contract 2 project.

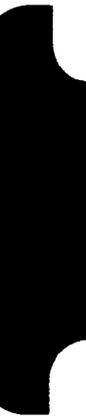
Bath County Water District

By: Mitchell Cooper
Chairman

Campbell, Rogers, Blair & Assoc.

By: [Signature]
Earl Rogers, III
154 Flemingsburg Road
Morehead KY 40351-1556





**Bath County Water District
Water
System Improvements
Preliminary Engineering Report
March 2004**

**Tetra Tech, Inc.
800 Corporate Drive
Lexington, Kentucky 40503
859.223.800**

Submitted By:



**Bryan K. Lovan, P.E.
Project Engineer**



BATH COUNTY WATER DISTRICT PRELIMINARY ENGINEERING REPORT

The Bath County Water District is proposing a project consisting of three phases. The first two phases will construct water lines in several areas of Bath and Menifee Counties. The Bath County phase will be funded by state Tobacco Development Funds and the Menifee County phase will be funded by Coal Severance Funds and ARC. The third phase will be funded by Rural Development and involve renovation of the Owingsville storage tank and constructing new storage tanks at Ore Mines and Perry Road. To improve efficiencies in its operation the District is proposing to install telemetry and radio read meters as part of the RD phase of the project. This engineering report reviews all three phases of the project, as it is being used by multiple funding agencies.

Project Planning Area

The Bath County Water District's service area covers all of Bath County with the exception of the Cities of Owingsville and Sharpsburg. Bath County wholesales water to these two communities. In addition to serving customers in Bath County, the District has customers in Menifee and Montgomery Counties.

Bath County and the service area in surrounding counties are rural in nature with numerous farms and small communities. A map showing the existing coverage area of the District and the location of the proposed line extensions is included at the end of this report.

Environmental Resources Present

Bath and Menifee Counties are considered Appalachian Counties. The southeastern portion of Bath and most of Menifee County is located in the Daniel Boone National Forest. Bath County is characterized by rolling hills with scattered communities, some incorporated and many not. Menifee County by contrast has much more hilly terrain and even more sparsely populated.

The Kentucky State Nature Preserves Commission lists numerous plants, fish, birds, mammals, and other species as of special concern, threatened, or endangered. The fact that a large portion of the Water District's service area is in the National Forest will influence when and where facilities are constructed. As part of the environmental assessment process, the US Fish and Wildlife Service will be contacted for input on potential impacts on threatened and/or endangered species and possible mitigation measures required to less the potential impacts.

The nearest air monitoring stations are in Carter and Fayette Counties. No significant violations occurred during year 2000 at these stations.

There are numerous streams that run through both counties. The 2002 report “303(d) List of Waters For Kentucky” identifies a number of streams in Bath County that do not support of one or more designated uses.

Growth Area and Population Trends

In 1990, the population of Bath County was 9,692 persons. By the year 2000, the population had increased 14.3 percent to 11,085. From 1998 to the current time, the customer base of the District has grown 19.5 percent from 2,723 customers to 3,255 customers today. Approximately 297 of the District’s total customers are located in Menifee County and another 262 are located in Montgomery County.

The Kentucky State Data Center projects that by the year 2030, Bath County will grow by 21.4 percent (low projection).

Existing Facilities

The Bath County Water District was established in 1968-9. It began providing water service in June 1970. The District purchases water from the Morehead Utility Plant Board (MUPB) and the City of Mt. Sterling. The District purchases an average of 1,020,000 MGD from MUPB and its contract allows a maximum of 2,066,000 MGD. The District purchases a small amount from Mt. Sterling, averaging approximately 53,000 GPD and the contract allows a maximum of 116,700 GPD.

Bath County wholesales water to the Cities of Sharpsburg and Frenchburg. The City of Frenchburg will be purchasing water from the Cave Run Water Authority once its facilities are operational, approximately 12 months from February 2004. When it begins purchasing water from Cave Run, it will no longer purchase water daily from Bath County Water District. The connection with Bath County will be for emergencies only.

The City of Owingsville has a project that advertised for construction bids in November 2003 that will result in facilities sufficient to allow the District to wholesale water to the City of Owingsville. The City of Owingsville’s projected usage is expected to make up for the loss of Frenchburg.

The amount sold and projected to be sold to the three cities is shown below.

<u>City</u>	<u>Average GPD Sold</u>	<u>Contract Maximum</u>
Frenchburg	265,000 GPD	350,000 GPD
Sharpsburg	192,000 GPD	288,000 GPD
Owingsville		300,000 GPD

The District has approximately 185 miles of waterline ranging in size from 3 inch to 12 inch. There are seven storage tanks in the system with a total capacity of 766,000 gallons. A storage tank was advertised for construction in November 2003. It was originally sized

at 1 million gallons but due to bid overruns, has been reduced to 500,000 gallons. There are nine pump stations in the system; four of which are hydro-pneumatic stations.

The District has maintained its system well. Its water loss is approximately 10 percent. A section of pipe along KY 36 is low pressure class pipe and cannot handle increased pressure. The storage tank in the Means area is too small for the demand in the area and needs to be at a higher elevation. The District's telemetry is outdated and some components do not have any telemetry.

Need for Project

Residents in the District's service area do not have a good alternative to public water service. Area groundwater is for the most part high in mineral content which adversely affect the taste and use for laundry. Most persons without public water service rely on hauled water and cisterns. Very few wells are drilled in the service area.

Cisterns are easily contaminated by surface runoff and/or infiltration from septic tank lateral fields. Wells, when used, can also be adversely affected by septic tanks and straight pipes.

The operating pressure in the Means area does fall below acceptable levels. The storage tank serving this area is too small and needs to be at a higher elevation to properly serve this area. A larger pump station would be required to service a new tank.

Many of the District's components, i.e. tanks, pump stations, and master meters do not have telemetry. The District personnel must actually visit these components to determine their operating status. The District's service area is quite large geographically and it is ineffective to not be able to control and observe the operations of the various system components from a central location such as the office located in Salt Lick.

In order to reduce the amount of time required to read the meters and reduce reading and entry errors, the District is proposing to install radio read meters. This will enable the District to continue to grow and keep cost down. After the initial cost of the equipment, the District will save money over the long run by not having to add additional personnel for meter reading purposes.

Alternative Considered

The Kentucky Infrastructure Authority established a process wherein water and wastewater projects desired by communities, water districts, and others are to be submitted to Area Water Management Councils then included in a state-wide database. It is from this database that members of the General Assembly in the 2003 Legislative Session picked projects to receive either Coal or Tobacco Development funds.

The General Assembly in the 2003 Session funded a project in Menifee County, project no. WX21165005, which as submitted to the KIA has a segment that will construct facilities for the Bath County Water District. Also funded was a project in Bath County, project no. WX21011003. The scope of these projects was identified by the District as part of the State's new system for cataloging projects. Alternatives were identified after this initial planning effort.

Primarily, the alternatives considered relate to the storage tanks. Two tanks, Ore Mines and Perry Road, have lead based paint (LBP) on the exterior and will require abatement. The system would benefit from a larger tank at the Ore Mines location. So the District has considered an alternative to abating the LBP and re-painting the tank with replacing it with a larger tank. Based on the cost estimate of abating the LBP, the District also considered replacing the Perry Road tank instead of re-painting. In the cost estimates discussed under the next section, the cost of these alternatives is shown.

Proposed Project

As discussed above, the District has two separate projects funded by the 2003 Kentucky General Assembly. Yet the projects are inter-related. The project funded for Menifee County includes a segment for the City of Frenchburg in addition to the Bath County Water District segment. The District's portion of this project involves the construction of the following:

- New 150,000 Gallon Storage Tank – Means, KY
- New Pump Station – Means, KY
- Replace Ore Mines Tank
- Replace Perry Road Tank
- Water Line Extensions along Clay Lick Road and Potterville Road

The Menifee County project will fund the Means tank, pump station, and Clay Lick water line in full. The other three activities will be funded one-half by the Menifee County project. This is because the two tanks; Ore Mines and Perry Road also serve customers in Bath County and one-half of the water line extension along Potterville Road is in Bath County.

The District will be seeking funding assistance from Rural Development with the balance of the cost of the Ore Mines and Perry Road tanks in addition to the renovation of the Owingsville storage tank. The Coal Development funds awarded to Menifee County will first go to the Menifee County Fiscal Court. The Court through an interlocal agreement with Bath County will commit funds to the improvements identified to take place within the District's service area.

The project funded in part by Tobacco Development Funds (TDF) for Bath County includes water line extensions to thirteen areas. To improve operational efficiencies the District want to install telemetry at 19 sites, and install radio read meters. The areas

where extensions will be constructed are shown in the map at the end of this report and are summarized below:

Area	Line Size	Linear Feet
Washington Branch	3 inch	11,100
Stepstone Road to US 60	3 inch	13,000
Old State Road	3 inch	2,600
Kendall Springs Road	3 inch	5,225
Hwy 36 at Slate Furnace	3 inch	2,100
Tunnel Hill Road	3 inch	10,000
Stepstone Service Road	4 inch	2,800
Old Peasticks Road	3 inch	4,875
White Oak Road	3 inch	7,080
Alcar Road	3 inch	3,965
SR 36 Owingsville to Sharpsburg	8 inch	12,500
East Fork (KY 3340)	3 inch	5,280
Potterville Road	3 inch	8,825
Clay Lick	3 inch	2,000

The tank improvements are as follows:

Tank	Existing Size	Proposed Size	Activity
Owingsville	100,000 Gallons	No Change	Renovation
Ore Mines	250,000 Gallons	300,000 Gallons	Replace
Perry Road	100,000 Gallons	150,000 Gallons	Replace
Means	100,000 Gallons	150,000 Gallons	Replace

The improvements proposed will be designed following the *Ten States Standards* utilized by the State of Kentucky. Tetra Tech, Inc., the selected professional engineers by the District, has utilized KYPIPE 2000 to determine the appropriate size waterlines, tanks, and pump stations.

The project budget on the following page shows the project costs. The budget has been divided into three sections. The first budget shows the Menifee County project, these activities will be funded from the Menifee County Coal Development Grant and an ARC grant (not yet awarded). The second section is the budget for all the activities to be funded by Rural Development. The third section is the budget to be paid by Bath County's Tobacco Development Grant and tap fees. The District wants to make the most of this opportunity and secure additional funding from Rural Development to make even more improvements to its system.

**BATH COUNTY WATER DISTRICT
PROJECT COSTS**

MENIFEE COUNTY PHASE

Construction Cost	Total Project Cost	Proposed Source of Funds:
Means Tank - 150,000 gallon	\$ 175,000	
Means Pump Station	\$ 65,000	
Ore Mines Tank <i>(One-half of cost)</i>	\$ 125,000 <i>new tank</i>	Menifee County Coal Development Grant \$550,000
Perry Road Tank <i>(One-half of cost)</i>	\$ 75,000 <i>new tank</i>	Tap Fees (33 customers x \$400) \$ 13,200
Clay Lick	\$ 14,000	ARC Grant \$ 75,540
Pottersville Road <i>(One-half of cost)</i>	\$ 30,890	
	<u>\$ 484,890</u>	
	subtotal:	TOTAL: \$638,740
Construction Contingency - 10%	\$ 48,490	
Non-Construction Costs		
Engineering Design	\$ 36,310	
Construction Administration	\$ 9,080	
Alcatraz Road	\$ 27,755	
SR 36 Owingsville to Sharpsburg	\$ 139,000	
Pottersville Road <i>(One-half of cost)</i>	\$ 30,890	
KY 3340 - East Fork Road	\$ 36,960	
	<u>\$ 646,065</u>	
	subtotal:	
Construction Contingency - 10%	\$ 64,610	
Non-Construction Costs		
Engineering Design	\$ 95,010	
Construction Administration	\$ 11,240	
Resident Inspection	\$ 40,975	
Additional Services - PSC Filing	\$ 5,000	
Administration - GADD	\$ 17,000	
Misc. - Advertising	\$ 2,500	
	<u>\$ 171,725</u>	
	subtotal:	
	<u>\$ 882,400</u>	
	TOTAL:	

**Bath County Water District
Contract No. 2
Tobacco Development Phase
Water System Expansion
Final Engineering Report
April 2004**

**Tetra Tech, Inc.
800 Corporate Drive
Lexington, Kentucky 40503
859.223.800**

Submitted By:



**Bryan K. Lovan, P.E.
Project Engineer**



4-8-04

**BATH COUNTY WATER DISTRICT
FINAL ENGINEERING REPORT
CONTRACT NO. 2 – WATER SYSTEM EXPANSION
TOBACCO DEVELOPMENT PHASE**

The Bath County Water District is proposing a project consisting of three phases. The first two phases will construct water lines in several areas of Bath and Menifee Counties. The Bath County phase, which this Final Engineering Report covers, will be funded by state Tobacco Development Funds and the Menifee County phase will be funded by Coal Severance Funds and ARC. The third phase will be funded by Rural Development and involve renovation of the Owingsville storage tank and constructing new storage tanks at Ore Mines and Perry Road. To improve efficiencies in its operation the District is proposing to install telemetry and radio read meters as part of the RD phase of the project.

Contract No. 2 involves the construction and installation of approximately 12.3 miles of water line in various areas of Bath County. The map on the following page shows the areas where lines will be extended.

Project Planning Area

The Bath County Water District's service area covers all of Bath County with the exception of the Cities of Owingsville and Sharpsburg. Bath County wholesales water to these two communities. In addition to serving customers in Bath County, the District has customers in Menifee and Montgomery Counties.

Existing Facilities

The Bath County Water District was established in 1968-9. It began providing water service in June 1970. The District purchases water from the Morehead Utility Plant Board (MUPB) and the City of Mt. Sterling. The District purchases an average of 1,020,000 MGD from MUPB and its contract allows a maximum of 2,066,000 MGD. The District purchases a small amount from Mt. Sterling, averaging approximately 53,000 GPD and the contract allows a maximum of 116,700 GPD.

Bath County wholesales water to the Cities of Sharpsburg and Frenchburg. Once the Cave Run Water Authority is operational, Bath County will no longer sell water to the City of Frenchburg but will be picking up the City of Owingsville as a wholesale customer.

The District has approximately 185 miles of waterline ranging in size from 3 inch to 12 inch. There are seven storage tanks in the system with a total capacity of 766,000 gallons. A storage tank was advertised for construction in November 2003. It was originally sized at 1 million gallons but due to bid overruns, has been reduced to 500,000 gallons. There are nine pump stations in the system; four of which are hydro-pneumatic stations.

NICHOLAS

Jacob
Bath County Water District

FLEMING

POWELL

WOLFE



PUMP STATION	CAPACITY (GPM)	TRK	HP	INLET PRESSURE	DISCHARGE PRESSURE
01 FLEMING W. 1	100	100	150	150 PSI	150 PSI
02 FLEMING W. 2	100	100	150	150 PSI	150 PSI
03 FLEMING W. 3	100	100	150	150 PSI	150 PSI
04 FLEMING W. 4	100	100	150	150 PSI	150 PSI
05 FLEMING W. 5	100	100	150	150 PSI	150 PSI
06 FLEMING W. 6	100	100	150	150 PSI	150 PSI
07 FLEMING W. 7	100	100	150	150 PSI	150 PSI
08 FLEMING W. 8	100	100	150	150 PSI	150 PSI
09 FLEMING W. 9	100	100	150	150 PSI	150 PSI
10 FLEMING W. 10	100	100	150	150 PSI	150 PSI
11 FLEMING W. 11	100	100	150	150 PSI	150 PSI
12 FLEMING W. 12	100	100	150	150 PSI	150 PSI
13 FLEMING W. 13	100	100	150	150 PSI	150 PSI
14 FLEMING W. 14	100	100	150	150 PSI	150 PSI
15 FLEMING W. 15	100	100	150	150 PSI	150 PSI
16 FLEMING W. 16	100	100	150	150 PSI	150 PSI
17 FLEMING W. 17	100	100	150	150 PSI	150 PSI
18 FLEMING W. 18	100	100	150	150 PSI	150 PSI
19 FLEMING W. 19	100	100	150	150 PSI	150 PSI
20 FLEMING W. 20	100	100	150	150 PSI	150 PSI
21 FLEMING W. 21	100	100	150	150 PSI	150 PSI
22 FLEMING W. 22	100	100	150	150 PSI	150 PSI
23 FLEMING W. 23	100	100	150	150 PSI	150 PSI
24 FLEMING W. 24	100	100	150	150 PSI	150 PSI
25 FLEMING W. 25	100	100	150	150 PSI	150 PSI
26 FLEMING W. 26	100	100	150	150 PSI	150 PSI
27 FLEMING W. 27	100	100	150	150 PSI	150 PSI
28 FLEMING W. 28	100	100	150	150 PSI	150 PSI
29 FLEMING W. 29	100	100	150	150 PSI	150 PSI
30 FLEMING W. 30	100	100	150	150 PSI	150 PSI

TANK ID	CAPACITY (GAL)	TYPE	BUILT	GROUND ELEVATION (FT)	TOP ELEVATION (FT)
T1 BULL LACK	100,000	CONC. GROUND	1970	888	897
T2 JOE ARMS	80,000	STEEL GROUND	1989	1011	1048
T3 JOHNSVILLE	100,000	STEEL ELEVATED	1989	991	1090
T4 BATHURST	80,000	CONC. GROUND	1977	871	890
T5 BATHURST	80,000	CONC. GROUND	1977	871	890
T6 BATHURST	80,000	CONC. GROUND	1977	871	890
T7 BATHURST	80,000	CONC. GROUND	1977	871	890
T8 BATHURST	80,000	CONC. GROUND	1977	871	890
T9 BATHURST	80,000	CONC. GROUND	1977	871	890
T10 BATHURST	80,000	CONC. GROUND	1977	871	890
T11 BATHURST	80,000	CONC. GROUND	1977	871	890
T12 BATHURST	80,000	CONC. GROUND	1977	871	890
T13 BATHURST	80,000	CONC. GROUND	1977	871	890
T14 BATHURST	80,000	CONC. GROUND	1977	871	890
T15 BATHURST	80,000	CONC. GROUND	1977	871	890
T16 BATHURST	80,000	CONC. GROUND	1977	871	890
T17 BATHURST	80,000	CONC. GROUND	1977	871	890
T18 BATHURST	80,000	CONC. GROUND	1977	871	890
T19 BATHURST	80,000	CONC. GROUND	1977	871	890
T20 BATHURST	80,000	CONC. GROUND	1977	871	890
T21 BATHURST	80,000	CONC. GROUND	1977	871	890
T22 BATHURST	80,000	CONC. GROUND	1977	871	890
T23 BATHURST	80,000	CONC. GROUND	1977	871	890
T24 BATHURST	80,000	CONC. GROUND	1977	871	890
T25 BATHURST	80,000	CONC. GROUND	1977	871	890
T26 BATHURST	80,000	CONC. GROUND	1977	871	890
T27 BATHURST	80,000	CONC. GROUND	1977	871	890
T28 BATHURST	80,000	CONC. GROUND	1977	871	890
T29 BATHURST	80,000	CONC. GROUND	1977	871	890
T30 BATHURST	80,000	CONC. GROUND	1977	871	890

PUMP	INLET PRESSURE	OUTLET PRESSURE
PW 1	150 PSI	150 PSI
PW 2	150 PSI	150 PSI
PW 3	150 PSI	150 PSI
PW 4	150 PSI	150 PSI

LEGEND

- 2" WATER MAIN
- 3" WATER MAIN
- 4" WATER MAIN
- 6" WATER MAIN
- 8" WATER MAIN
- 12" WATER MAIN
- PUMP STATION
- STORAGE TANK

**BATH COUNTY WATER DISTRICT
- SYSTEM MAP -**



TETRA TECH, INC.

The District has maintained its system well. Its water loss is approximately 10 percent.

Need for Project

Residents in the District's service area do not have a good alternative to public water service. Area groundwater is for the most part high in mineral content which adversely affect the taste and use for laundry. Most persons without public water service rely on hauled water and cisterns. Very few wells are drilled in the service area.

Cisterns are easily contaminated by surface runoff and/or infiltration from septic tank lateral fields. Wells, when used, can also be adversely affected by septic tanks and straight pipes.

Proposed Project

The Tobacco Development funded project will install approximately 12.3 miles of water line ranging in size from 3 inch to 8 inch.

This phase, Contract No. 2, was bid on March 24, 2004. There were four bidders. The low bidder was G&W Construction of Morehead, Kentucky. The original bid was for \$834,941.90. This bid when added to the non-construction cost of the project exceeded the funding available to the District.

The District's original project included extensions throughout the county to unserved areas as well as extending existing lines to create "loops" in their system. These "loops" were added to the project to help insure greater water quality and reduce the number of customers that are without water during line breaks. In order to reduce the bid amount to within the budget, a number of these loops were taken out of the project along with the radio read meter change outs, the Washington Br. PRV, and all the customer services. The branch lines taken out were creating the "loops" and do not decrease the number of new customers. These lines, as well as the other items, will be done at some point either by the District or with any left over funds from this project.

The deductions were taken out of all four bids to determine if it would change the apparent low bidder. G&W Construction was still the low bidder after the loops, meter change outs, the PRV, and the customer services were eliminated from Contract No. 2.

Tetra Tech, Inc. has checked the references for the contractors and their references gave favorable reports. Tetra Tech, Inc. has recommended the awarding of the contract to the low bidder. The bid tabulations and engineer's recommendation letter is attached to this report.

The projected budget for this project is as follows:

Construction	\$592,704.94
10% Contingency	\$59,300.00

Engineering Design	\$53,360.00
Construction Inspection	\$34,600.00
Additional Services	\$5,000.00
Gateway ADD Administration	\$17,000.00
Misc. – Advertising	<u>\$2,500.00</u>
	\$764,464.94

The funding available for the project is as follows:

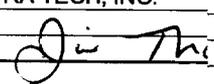
Tobacco Development Funds	\$850,000.00
Tap Fees (estimate)	<u>\$32,400.00</u>
	\$882,400.00

No rate adjustment is required as a result of this project. The Tobacco Development Funds are grant funds and the additional operational cost should be off set by the additional customers added as a result of these line extensions.

Conclusions and Recommendations

This project is critical for growth of the District and the opportunity it provides to the residents of the areas to be served for clean water.

The grant funds make this project very affordable to the District and the customers served.

BID TABULATION			
BATH COUNTY WATER DISTRICT			
CONTRACT 2 - WATER SYSTEM			
Wednesday, March 24, 2004, 1:00			
R. Risner Construction, Inc.			
West Liberty, KY			
Item No.	Descr	\$/unit	Bid Amount
1	3-inch Water Main, PVC	\$ 5.76	\$ 240,474.24
2	4-inch Water Main, PVC	\$ 6.26	\$ 107,909.88
3	8-inch Water Main, PVC	\$ 14.79	\$ 225,843.30
4	3-inch Water Main, PVC	\$ 5.78	\$ 55,493.78
5	3-inch Gate Valve and B	\$ 325.00	\$ 7,800.00
6	4-inch Gate Valve and B	\$ 400.00	\$ 3,200.00
7	8-inch Gate Valve and B	\$ 750.00	\$ 3,750.00
8	4-inch Gate Vallve and B	\$ 900.00	\$ 900.00
9	Connection to Existing W	\$ 1,500.00	\$ 19,500.00
10	Wet Tap Connection to E	\$ 2,500.00	\$ 15,000.00
11	Bored Highway Crossing	\$ 85.00	\$ 2,975.00
12	Bored Highway Crossing	\$ 100.00	\$ 6,000.00
13	Bored Highway Crossing	\$ 120.00	\$ 24,000.00
14	Open Cut Crossing w/Ca	\$ 65.00	\$ 22,750.00
15	Type "B" Creek Crossing	\$ 60.00	\$ 17,100.00
16	Type "C" Creek Crossing	\$ 70.00	\$ 5,250.00
17	Flushing Assembly	\$ 800.00	\$ 10,400.00
18	Air Release Valve	\$ 600.00	\$ 3,000.00
19	Customer Service Same	\$ 500.00	\$ 37,500.00
20	Customer Service Oppos	\$ 575.00	\$ 22,425.00
21	Customer Service Same	\$ 625.00	\$ 6,250.00
22	Customer Service Oppos	\$ 675.00	\$ 3,375.00
23	Additional Service Tubing	\$ 8.00	\$ 800.00
24	Reconnection of Exist. S	\$ 650.00	\$ 20,800.00
25	Radio Read Software and	\$ 48,000.00	\$ 48,000.00
26	Additional Radio Read M	\$ 350.00	\$ 17,500.00
27	Main Line Pressure Red	\$ 9,000.00	\$ 9,000.00
			\$ 936,996.20
The above is a true and c			
I certify that this is true ar			
TETRA TECH, INC.			
By: 			
Jim Thompson, Project M			



TETRA TECH, INC

ITEM NO.	SUMMARY OF:	REMOVED QUANTITIES			
		OF TS	UNIT MEAS.	COST PER UNIT	TOTAL COST
1	3" PVC, SDR 21, CLASS 200	44	LF	\$ 5.36	\$ 54,907.84
2	4" PVC, SDR 21, CLASS 200	70	LF	\$ 5.85	\$ 43,114.50
3	8" PVC, SDR 21, CLASS 200	50	LF	\$ 14.13	\$ 16,249.50
4	3" PVC, SDR 17, CLASS 350				
5	3" G.V. & BOX		EA	\$ 345.10	\$ 345.10
6	4" G.V. & BOX				
7	8" G.V. & BOX		EA	\$ 608.99	\$ 608.99
8	4" G.V. & BOX W/BYPASS METER				
9	CONNECTION TO EXISTING WATER		EA	\$ 1,092.86	\$ 6,557.16
10	WET TAP CONNECTION TO EXISTING		EA	\$ 2,126.26	\$ 2,126.26
11	BORED HIGHWAY CROSSING FOR 3				
12	BORED HIGHWAY CROSSING FOR 4				
13	BORED HIGHWAY CROSSING FOR 8		LF	\$ 90.00	\$ 3,600.00
14	OPEN CUT ROADWAY CROSSING W		LF	\$ 35.00	\$ 1,400.00
15	TYPE "B" CREEK CROSSING		EA	\$ 45.00	\$ 900.00
16	TYPE "C" CREEK CROSSING				
17	FLUSHING ASSEMBLY		EA	\$ 1,064.84	\$ 3,194.52
18	AIR RELEASE VALVE				
19	CUSTOMER SERVICE CONNECTION		EA	\$ 462.32	\$ 34,674.00
20	CUSTOMER SERVICE CONNECTION		EA	\$ 724.05	\$ 28,237.95
21	CUSTOMER SERVICE CONNECTION		EA	\$ 496.56	\$ 4,965.60
22	CUSTOMER SERVICE CONNECTION		EA	\$ 764.98	\$ 3,824.90
23	ADDITIONAL SERVICE TUBING	0	EA	\$ 5.18	\$ 518.00
24	RECONNECTION OF EXISTING CUS		EA	\$ 344.52	\$ 11,024.64
25	RADIO READ SOFTWARE AND EQU				
26	ADDITIONAL RADIO READ METER	0	EA	\$ 330.40	\$ 16,520.00
27	MAIN LINE PRESSUE REDUCING ST		EA	\$ 9,468.00	\$ 9,468.00

TOTAL CALC

\$ 242,236.96

QUANTITIES IN **RED** HAVE BEEN RE



TETRA TECH, INC.

April 5, 2004

Ms. Jeanette Walton, Manager
Bath County Water District
P.O. Box 369
Salt Lick, KY 40371

RE: Recommendation of Award of Construction Contract
Contract No. 2
Water System Extensions

Dear Jeanette:

Bids for the above referenced project were opened Wednesday, March 24, 2004 at 1:00 pm local time. The low bidder was G. & W. Construction Company, Morehead, KY in the amount of \$834,941.90. This exceeds the districts' available funds. After discussion with you and the contractor, the following items have been taken out of the project at this time; Mudlick Rd., Elk Lick Rd., Old State Rd., East Fork Rd., KY 36 from the Owingsville master meter to the existing PRV, the radio read meter change outs, all customer services, and the Washington Br. PRV. By removing these items the adjusted construction amount will be \$592,704.94.

We would recommend to the Bath County Water District that this contract be awarded to the low bidder, G. & W. Construction, in the amount of \$592,704.94.

If at the end of the project we have any available funds, some of the items removed may be added back into the project and be handled as a change order.

If you have any questions or need additional information please contact me.

Sincerely,

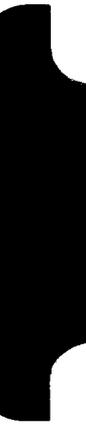
TETRA TECH, INC.

Jim Thompson
Project Engineer/Manager

PC: G. & W. Construction

Gateway Area Development District
Theresa Shields, Project Administrator

File



Eng.



ERNIE FLETCHER
GOVERNOR

ENVIRONMENTAL AND PUBLIC PROTECTION CABINET
DEPARTMENT FOR ENVIRONMENTAL PROTECTION
DIVISION OF WATER
14 REILLY ROAD
FRANKFORT, KENTUCKY 40601-1190
www.kentucky.gov
February 18, 2004

LADANA S. WILCHER
SECRETARY

RECEIVED

MAR - 2 2003

Tetra Tech, Inc.

Bath County Water District
Attn: Jeanette Walton
P.O. Box 369
Salt Lick, KY 40371

Re: Bath Co Water District PWS--33781
DW No. 0060022-04-001
Water System Expansion
Activity ID: APE20040001

Dear Ms. Walton:

We have reviewed the plans and specifications for the above referenced project. The plans include the construction of approximately 15,200 feet of 8-inch PVC, 12,938 feet of 4-inch PVC, 62,088 feet of 3-inch PVC water lines, and a Booster Pump Station capable of delivering 126 GPM at 127 feet of total dynamic head. This is to advise that plans and specifications for the above referenced project are APPROVED with respect to sanitary features of design, as of this date with the requirements contained in the enclosed waterline extension construction permit.

If you have any questions regarding this decision, please contact John B. Mathews, Jr., at (502) 564-2225, extension 578.

Sincerely,

Donna S. Marlin
Donna S. Marlin, Manager
Drinking Water Branch
Division of Water

DSM/JBM
Enclosure

CC: Tetra Tech., Inc
Bath County Health Department
Montgomery County Health Department
Menifee County Health Department
Public Service Commission
Drinking Water Files

Distribution-Major Construction

Bath Co Water District

Subject Item Inventory

Activity ID No.: APE20040001

Subject Item Inventory:

ID	Designation	Description
AIO033781		
PORT1	Water Line Extensions	15206'-8", 12938'-4", & 62008'-3" PVC
PORT2	Booster Pump	126 GPM @ 127ft of head--Booster Pump

Subject Item Groups:

ID	Description	Components
GACT1	126 GPM Booster Pump & 90,152 feet of PVC	PORT2 126 GPM @ 127ft of head--Booster Pump PORT1 15206'-8", 12938'-4", & 62008'-3" PVC

KEY

ACTV = Activity
 AREA = Area
 EQPT = Equipment
 PERS = Personnel
 STOR = Storage
 TRMT = Treatment

AIOO = Agency Interest
 COMB = Combustion
 MNPT = Monitoring Point
 PORT = Transport
 STRC = Structure

Distribution-Major Construction

Bath Co Water District
Facility Requirements

Activity ID No.: APE20040001

GACT1 (Water System Expansion) 126 GPM Booster Pump & 90,152 feet of PVC:

Monitoring Requirements:

Condition No.	Parameter	Condition
M-1	Coliform	The presence or absence of total Coliform monitored by sampling and analysis as needed shall be determined for the new or relocated water line(s). Take samples at connection points to existing lines, at 1 mile intervals, and at dead ends without omitting any branch of the new or relocated water line. Sample bottles shall be clearly identified as "special" construction tests. [401 KAR 8:100 Section 1(7), 401 KAR 8:150 Section 4, Recommended Standards for Water Works 8.5.6] This requirement is applicable during the following months: All Year. Statistical basis: Instantaneous determination.

M-2	Coliform	The presence or absence of total Coliform monitored by sampling and analysis as needed shall be determined for the new pump(s). If the pump(s) are independent of (not directly connected to) the new or relocated lines, take at least 1 sample at the discharge side pitcock. Otherwise, no additional sampling beyond the sampling required for new or relocated lines shall be required. Sample bottles shall be clearly identified as "special" construction tests. [401 KAR 8:100 Section 1(7)] This requirement is applicable during the following months: All Year. Statistical basis: Instantaneous determination.
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Submittal/Action Requirements:

Coliform:

Condition No.	Condition
S-1	Coliform For new construction projects, the distribution system, using the most expedient method, shall submit Coliform test results to the Cabinet: Due immediately following disinfection and flushing. [401 KAR 8:150 Section 4(2)]

Distribution-Major Construction

Bath Co Water District
Facility Requirements

Activity ID No.: APE20040001

Submittal/Action Requirements:

Condition No.	Condition
S-2	For proposed changes to the approved plan, submit information: Due prior to any modification to the Cabinet for approval. Changes to the approved plan shall not be implemented without the prior written approval of the Cabinet. [401 KAR 8:100 Section 1(8)]
S-3	The person who presented the plans shall submit the professional engineer's certification: Due when construction is complete to the Division of Water. The certification shall be signed by a registered professional engineer and state that the water project has been constructed and tested in accordance with the approved plans, specifications, and requirements. [401 KAR 8:100 Section 1(8)]

Narrative Requirements:

Additional Limitations:

Condition No.	Condition
T-1	Additional Limitations: Chlorinated water resulting from disinfection of project components shall be disposed in a manner which will not violate 401 KAR 5:031. [401 KAR 8:020 Section 2(20)]

Condition No.	Condition
T-2	This project has been permitted under the provisions of KRS Chapter 224 and regulations promulgated pursuant thereto. Issuance of this permit does not relieve the applicant from the responsibility of obtaining any other approvals, permits or licenses required by this Cabinet and other state, federal and local agencies. [401 KAR 8:100 Section 1(7)]
T-3	Unless construction of this project is begun within 1 year from the issuance date of this permit, the permit shall expire. If requested prior to the permit expiration, an official extension from the Division of Water may be granted. If this permit expires, the original plans and specifications may be resubmitted for a new comprehensive review. If you have any questions concerning this project, please contact the Drinking Water Branch at 502/564-3410. [401 KAR 8:100 Section 1(9)]

Distribution-Major Construction

Bath Co Water District
Facility Requirements

Activity ID No.: APE20040001

Narrative Requirements:

Condition No.	Condition
T-4	During construction, a set of approved plans and specification shall be available at the job site at all times. All work shall be performed in accordance with the approved plans and specifications. [401 KAR 8:100 Section 1(7)(a)]

Distribution-Major Construction

Bath Co Water District
Facility Requirements

Activity ID No.: APE20040001

PORT1 (Water Line Extensions) 15206'-8", 12938'-4", & 62008'-3" PVC:

Limitation Requirements:

Condition No.	Parameter	Condition
L-1	Depth	A continuous and uniform bedding shall be provided in the trench for all buried pipe. Backfill material shall be tamped in layers around the pipe and to a sufficient height above the pipe to adequately support and protect the pipe. Stones found in the trench shall be removed for a Depth ≥ 6 in below the bottom of the pipe. [Recommended Standards for Water Works 8.5.2] This requirement is applicable during the following months: All Year. Statistical basis: Not applicable.
L-2	Depth	All water lines shall be covered to a Depth ≥ 30 in to prevent freezing. [Recommended Standards for Water Works 8.5.3, 401 KAR 8:100 Section 1(7)] This requirement is applicable during the following months: All Year. Statistical basis: Minimum.
L-3	Diameter	All water lines shall have Diameter ≥ 3 in. [Recommended Standards for Water Works 8.1.4] This requirement is applicable during the following months: All Year. Statistical basis: Minimum.
L-4	Diameter	Water lines with Diameter < 6 in shall not have fire hydrants. [Recommended Standards for Water Works 8.1.5] This requirement is applicable during the following months: All Year. Statistical basis: Minimum.
L-5	Diameter	All new and existing water lines serving fire hydrants or where fire protection is provided shall have Diameter ≥ 6 in. [Recommended Standards for Water Works 8.1.2] This requirement is applicable during the following months: All Year. Statistical basis: Minimum.
L-6	Distance	Water lines shall have a sufficient quantity of valves so that inconvenience and sanitary hazards will be minimized during repairs. A valve spacing Distance ≤ 1.0 mi should be utilized. [Recommended Standards for Water Works 8.2] This requirement is applicable during the following months: All Year. Statistical basis: Not applicable.
L-7	Distance	Hydrant drains shall not be connected to sanitary sewers or storm drains and shall be located a Distance > 10 ft from sanitary sewers and storm drains. [Recommended Standards for Water Works 8.3.4] This requirement is applicable during the following months: All Year. Statistical basis: Not applicable.

Distribution-Major Construction

Bath Co Water District
Facility Requirements

Activity ID No.: APE20040001

Limitation Requirements:

Condition No.	Parameter	Condition
L-8	Distance	<p>Except when not practical, water lines shall be laid a horizontal Distance \geq 10 ft from any existing or proposed sewer. The distance shall be measured edge to edge.</p> <p>In cases where it is not practical to maintain a 10 foot separation, water lines may be installed closer to a sewer provided that the water lines shall be laid in a separate trench or on an undisturbed shelf located on one side of the sewer at such an elevation that the bottom of the water line is at least 18 inches above the top of the sewer. [Recommended Standards for Water Works 8.6.2] This requirement is applicable during the following months: All Year. Statistical basis: Not applicable.</p>
L-9	Distance	<p>When water lines and sewers cross,</p> <ol style="list-style-type: none">1) water lines shall be laid such that the bottom of the water line is a vertical Distance \geq 18 in above the top of the sewer line,2) 1 full length of the water pipe shall be located so that both joints of the water pipe will be as far from the sewer as possible, and3) special structural support for the water and sewer pipes may be required. [Recommended Standards for Water Works 8.6.3] This requirement is applicable during the following months: All Year. Statistical basis: Not applicable.
L-10	Distance	<p>The open end of an air relief pipe from automatic valves shall be extended a Distance \geq 1.0 ft above grade and provided with a screened, downward-facing elbow. The pipe from a manually operated valve shall be extended to the top of the pit. Use of manual air relief valves is recommended wherever possible. [Recommended Standards for Water Works 8.4.2] This requirement is applicable during the following months: All Year. Statistical basis: Not applicable.</p>
L-11	Pressure	<p>Pipes shall not be installed unless all points of the distribution system remain designed for ground level Pressure \geq 20 psi under all conditions of flow. [Recommended Standards for Water Works 8.1.1] This requirement is applicable during the following months: All Year. Statistical basis: Minimum.</p>
L-12	Pressure	<p>Pressure \geq 30 psi must be available on the discharge side of all meters. [401 KAR 8:100 Section 4(2)] This requirement is applicable during the following months: All Year. Statistical basis: Instantaneous determination.</p>

Distribution-Major Construction

Bath Co Water District
Facility Requirements

Activity ID No.: APE20040001

Limitation Requirements:

Condition No.	Parameter	Condition
L-13	Residual Disinfection	<p>New or relocated water lines shall be thoroughly disinfected (in accordance with AWWA Standard C651) upon completion of construction and before being placed into service. To disinfect the new or relocated lines use chlorine or chlorine compounds in such amounts as to produce an initial disinfectant concentration of at least 50 ppm and a Residual Disinfection \geq 25 ppm at the end of 24 hours. Follow the line disinfection with thorough flushing and place the lines into service if, and only if, Coliform monitoring applicable to the line does not show the presence of Coliform.</p> <p>If Coliform is detected, repeat flushing of the line and Coliform monitoring. If Coliform is still detected, repeat disinfection and flushing as if the line has never been disinfected. Continue the described process until monitoring does not show the presence of Coliform. [401 KAR 8:150 Section 4(1), Recommended Standards for Water Works 8.5.6] This requirement is applicable during the following months: All Year. Statistical basis: Minimum.</p>
L-14	Velocity	<p>Except in underserved areas, each fire or flush hydrant shall be sized so that Velocity \geq 2.5 ft/sec can be achieved in the water main served by the hydrant during flushing.</p> <p>Based on the hydraulic analysis/data submitted, the areas served by the following extension(s) are considered to be underserved:</p> <ul style="list-style-type: none"> a) Tunnel hill Rd., b) Alcar Rd., c) White Oak Rd., d) Washington Br. <p>This designation indicates that without improvements to the existing infrastructure, future extensions may not be able to provide the required minimum pressure of 30 psi on the discharge side of customers' meters. Without improvements to the infrastructure, future extensions may be denied. The underserved designation may be used to help prioritize areas under the Governor's 2020 plan for funding future infrastructure improvements. [Recommended Standards for Water Works 8.1.6.b, 401 KAR 8:100 Section 1(7)] This requirement is applicable during the following months: All Year. Statistical basis: Minimum.</p>

Monitoring Requirements:

Condition No.	Parameter	Condition
M-1	leaks	<p>The presence or absence of leaks monitored by physical testing as needed shall be determined in all types of installed pipe. Pressure testing and leakage testing shall be in accordance with the latest edition of AWWA Standard C600. [Recommended Standards for Water Works 8.5.5] This requirement is applicable during the following months: All Year. Statistical basis: Instantaneous determination.</p>

Distribution-Major Construction

Bath Co Water District
Facility Requirements

Activity ID No.: APE20040001

Narrative Requirements:

Additional Limitations:

Condition No.	Condition
T-1	<p>Additional Limitations: Water line installation shall be in accordance with AWWA standards or manufacturer recommendations. [Recommended Standards for Water Works 8.5.1]</p>
T-2	<p>Additional Limitations: Pipes, fittings, valves and fire hydrants shall conform to the latest standards issued by the AWWA or NSF (if such standards exist). PVC and PE piping used must be certified to ANS/NSF Standard 61. [Recommended Standards for Water Works 8.0.1]</p>
T-3	<p>Additional Limitations: At high points in water lines, where air can accumulate, provisions shall be made to remove the air by means of hydrants or air relief valves. Automatic air relief valves shall not be used in situations where manhole or chamber flooding may occur. [Recommended Standards for Water Works 8.4.1]</p>
T-4	<p>Additional Limitations: All tees, bends, plugs and hydrants shall be provided with reaction blocking, tie rods or joints designed to prevent movement. [Recommended Standards for Water Works 8.5.4]</p>
T-5	<p>Additional Limitations: For lines that dead end, a fire hydrant shall be required at the end of each 6 inch or larger diameter line and a flush hydrant shall be required at the end of each line that is less than 6 inches in diameter. [Recommended Standards for Water Works 8.1.6]</p>
T-6	<p>Additional Limitations: For each fire or flush hydrant, auxiliary valves shall be installed in the hydrant lead pipe. [Recommended Standards for Water Works 8.3.3]</p>
T-7	<p>Additional Limitations: No flushing device, blow-off, or air relief valve shall be directly connected to any sewer. Chambers, pits or manholes containing valves, blow-offs, meters, or other such appurtenances shall not be directly connected to any storm drain or sanitary sewer. Such chambers, pits or manholes shall be drained to absorptions pits underground or to the surface of the ground where they are not subject to flooding by surface water. [Recommended Standards for Water Works 8.1.6, Recommended Standards for Water Works 8.4.3]</p>
T-8	<p>Additional Limitations: If water lines are installed or replaced in areas of organic contamination or in areas within 200 ft of underground or petroleum storage tanks, ductile iron or other nonpermeable materials shall be used in all portions of the water line installation or replacement. [401 KAR 8:100 Section 1(5)(d)6, Recommended Standards for Water Works 8.0.2]</p>

Distribution-Major Construction

Bath Co Water District
Facility Requirements

Activity ID No.: AFE20040001

Narrative Requirements:

Additional Limitations:

Condition No.	Condition
T-9	<p>Additional Limitations: No water pipe shall pass through or come in contact with any part of a sewer manhole. [Recommended Standards for Water Works 8.6.6]</p>
T-10	<p>Additional Limitations: If a fire sprinkler system is to be installed, a double check detector assembly approved for backflow prevention shall be utilized. The double check detector assembly of the system shall be accessible for testing. [401 KAR 8:100 Section 1(7)]</p>
T-11	<p>Additional Limitations: If water lines cross a stream or wetland, the provisions in the attached Water Quality Certification shall apply. If you have any questions please contact John Dovak of the Water Quality Branch at (502) 564-2225, extension 485. [401 KAR 8:100 Section 1(7)]</p>

Subfluvial Pipe Crossings:

Condition No.	Condition
T-12	<p>Subfluvial Pipe Crossings: For subfluvial pipe crossings, a floodplain construction permit will not be required pursuant to KRS 151.250 if the following requirements of 401 KAR 4:050 Section 2 are met.</p> <ol style="list-style-type: none">1) No material may be placed in the stream or in the flood plain of the stream to form construction pads, coffer dams, access roads, etc. during construction of pipe crossings.2) Crossing trenches shall be backfilled as closely as possible to the original contour.3) All excess material resulting from construction displacement in a crossing trench shall be disposed of outside the flood plain.4) For erodible channels, there shall be at least 30 inches of backfill on top of all pipe or conduit points in the crossing.5) For nonerodible channels, pipes or conduits in the crossing shall be encased on all sides by at least 6 inches of concrete with all pipe or conduit points in the crossing at least 6 inches below the original contour of the channel. [401 KAR 8:100 Section 1(7)]

Distribution-Major Construction

Bath Co Water District
Facility Requirements

Activity ID No.: APE20040001

Narrative Requirements:

Subfluvial Pipe Crossings:

Condition No.	Condition
T-13	<p data-bbox="513 1577 541 1864">Subfluvial Pipe Crossings:</p> <p data-bbox="546 1247 574 1864">For subfluvial pipe crossings greater than 15 feet in width,</p> <ol data-bbox="579 764 801 1864" style="list-style-type: none"><li data-bbox="579 764 607 1864">1) the pipe shall be of special construction, having flexible, restrained, or welded watertight joints, and<li data-bbox="612 659 657 1864">2) valves shall be provided at both ends of water crossings so that the section can be isolated for testing or repair. Valves shall<ol data-bbox="662 1486 801 1864" style="list-style-type: none"><li data-bbox="662 1591 690 1864">a) be easily accessible,<li data-bbox="695 1486 723 1864">b) not be subject to flooding, and<li data-bbox="728 138 801 1864">c) if closest to the supply source, be in a manhole with permanent taps made on each side of the valve to allow insertion of a small meter to determine leakage and for sampling purposes. [Recommended Standards for Water Works 8.7.2]

Distribution-Major Construction

Bath Co Water District
Facility Requirements

Activity ID No.: APE20040001

Page 10 of 15

PORT2 (Booster Pump) 126 GPM @ 127ft of head--Booster Pump :

Limitation Requirements:

Condition No.	Parameter	Condition
L-1	Pressure	Pump stations shall be located or controlled so that intake Pressure \geq 20 psi is maintained during normal pump operation. [Recommended Standards for Water Works 6.4.b] This requirement is applicable during the following months: All Year. Statistical basis: Minimum.
L-2	Pressure	Pump stations shall be located or controlled so that an automatic cutoff or a low pressure controller maintains a Pressure \geq 10 psi in the suction line under all operating conditions. [Recommended Standards for Water Works 6.4.c] This requirement is applicable during the following months: All Year. Statistical basis: Minimum.
L-3	Residual Disinfection	New pumps shall be thoroughly disinfected (in accordance with AWWA Standard C651) upon completion of construction and before being placed into service. To disinfect new pumps use chlorine or chlorine compounds in such amounts as to produce an initial disinfectant concentration of at least 50 ppm and a Residual Disinfection \geq 25 ppm at the end of 24 hours. Follow the disinfection with thorough flushing and place each pump into service if, and only if, Coliform monitoring applicable to the pump does not show the presence of Coliform. If Coliform is detected, repeat flushing of the pump and Coliform monitoring. If Coliform is still detected, repeat disinfection and flushing as if the pump has never been disinfected. Continue the described process until monitoring does not show the presence of Coliform. [401 KAR 8:100 Section 1(7)] This requirement is applicable during the following months: All Year. Statistical basis: Minimum.
L-4	Slope	Pumping facilities shall be located and designed to maintain the sanitary quality of pumped water. As part of this, all pump station floors shall have Slope \geq 3 in per 10 ft to a suitable drain. [Recommended Standards for Water Works 6.2.e, Recommended Standards for Water Works 6.0, Recommended Standards for Water Works 6.1] This requirement is applicable during the following months: All Year. Statistical basis: Minimum.
L-5	Air Change Rate	Ventilation shall conform to existing local and/or state codes. At a minimum forced ventilation shall produce an Air Change Rate \geq 6 air change(s)/hr. [401 KAR 8:100 Section 1(7), Recommended Standards for Water Works 6.2.5] This requirement is applicable during the following months: All Year. Statistical basis: Minimum.

Distribution-Major Construction

Bath Co Water District
Facility Requirements

Activity ID No.: APE20040001

Limitation Requirements:

Condition No.	Parameter	Condition
L-6	Height	<p>Pumping stations shall not be subject to flooding. To this end,</p> <ol style="list-style-type: none">1) grading around stations shall lead surface drainage away and2) stations shall be elevated or protected to a Height \geq 3 ft above the highest of the following:<ol style="list-style-type: none">a) the 100-year flood elevation, orb) the highest recorded flood elevation. [Recommended Standards for Water Works 6.1.1, Recommended Standards for Water Works 6.0] This requirement is applicable during the following months: All Year. Statistical basis: Minimum. <p>When a pump station has pits or compartments which must be entered, stairways or ladders shall be provided between all floors. Stairs shall have risers with a Height \leq 9 in, handrails on both sides, and treads with non-slip material wide enough for safety. [Recommended Standards for Water Works 6.2.3] This requirement is applicable during the following months: All Year. Statistical basis: Maximum.</p>
L-7	Height	

Narrative Requirements:

Additional Limitations:

Condition No.	Condition
T-1	<p>Additional Limitations: Pumping stations shall be so located that the proposed site will meet the requirements for hydraulics of the system. [Recommended Standards for Water Works 6.1]</p>
T-2	<p>Additional Limitations: Pumping stations shall be readily accessible at all times for servicing and repairs. [Recommended Standards for Water Works 6.1.1.b, Recommended Standards for Water Works 6.4.3]</p>
T-3	<p>Additional Limitations: Pumping stations shall be designed to prevent vandalism and protect against entrance of animals or unauthorized persons. [Recommended Standards for Water Works 6.1.1.d]</p>
T-4	<p>Additional Limitations: Pumping stations shall be of durable construction with outward-opening doors. [Recommended Standards for Water Works 6.2.b]</p>

Distribution-Major Construction

Bath Co Water District
Facility Requirements

Activity ID No.: APE20040001

Narrative Requirements:

Additional Limitations:

Condition No.	Condition
T-5	<p>Additional Limitations: Pumping stations shall be fire and weather resistant. [Recommended Standards for Water Works 6.2.b]</p>
T-6	<p>Additional Limitations: Pumping stations shall have suitable pump gland discharges so that drainage from the glands is not onto the floor. [Recommended Standards for Water Works 6.2.f]</p>
T-7	<p>Additional Limitations: If underground structures are present at pumping stations, they shall waterproofed. [Recommended Standards for Water Works 6.2.d]</p>
T-8	<p>Additional Limitations: Pumping stations shall have adequate space for the installation of additional pumps. [Recommended Standards for Water Works 6.2.a]</p>
T-9	<p>Additional Limitations: Pumping stations shall have adequate space for the safe servicing of all equipment. [Recommended Standards for Water Works 6.2.a]</p>
T-10	<p>Additional Limitations: Pump stations shall have crane-ways, hoist beams, eyebolts, or other adequate facilities for servicing or removal of pumps, motors or other heavy equipment. [Recommended Standards for Water Works 6.2.2.a]</p>
T-11	<p>Additional Limitations: Pump stations shall have openings as needed for removal of heavy or bulky equipment. [Recommended Standards for Water Works 6.2.2.b]</p>
T-12	<p>Additional Limitations: Pump stations shall have a convenient tool board, or other facilities as needed, for proper maintenance of equipment. [Recommended Standards for Water Works 6.2.2.c]</p>
T-13	<p>Additional Limitations: In areas where excess moisture could cause safety hazards or damage to equipment, dehumidification shall be provided. [401 KAR 8:100 Section 1(7), Recommended Standards for Water Works 6.2.6]</p>
T-14	<p>Additional Limitations: Electrical controls shall be located above grade. [Recommended Standards for Water Works 6.6.5]</p>

Distribution-Major Construction

Bath Co Water District
Facility Requirements

Activity ID No.: APE20040001

Narrative Requirements:

Additional Limitations:

Condition No.	Condition
T-15	<p>Additional Limitations: All electrical equipment and work shall conform with the applicable state and local electrical codes and the National Electrical Code. [Recommended Standards for Water Works 6.5, Recommended Standards for Water Works 6.2.7]</p>
T-16	<p>Additional Limitations: Pump stations shall be adequately lighted throughout. [Recommended Standards for Water Works 6.2.7]</p>
T-17	<p>Additional Limitations: All automatic pump stations shall be provided with automatic signaling apparatus which will report when the station is out of service. All remote controlled stations shall be electrically operated and controlled and shall have signaling apparatus of proven performance. [Recommended Standards for Water Works 6.5]</p>
T-18	<p>Additional Limitations: Automatic or remote control pump stations shall be located or shall have control devices setup so that the range between start and cutoff pressure prevents excessive pump cycling. [Recommended Standards for Water Works 6.4.d]</p>
T-19	<p>Additional Limitations: Equipment shall be provided or other arrangements made to prevent surge pressures from activating controls which switch on pumps or activate other equipment outside the normal design cycle of operation. [Recommended Standards for Water Works 6.6.5]</p>
T-20	<p>Additional Limitations: Provisions shall be made to prevent energizing the motor in the event of a backspin cycle. [Recommended Standards for Water Works 6.6.5]</p>
T-21	<p>Additional Limitations: Pump stations shall be provided with enough heat to prevent freezing of equipment or treatment processes. [Recommended Standards for Water Works 6.2.4]</p>
T-22	<p>Additional Limitations: Pump stations shall have at least 2 pumps. Pumps shall be sized so that if any single pump is out of service, the remaining pump or pumps shall be capable of providing the peak demand on the station. [Recommended Standards for Water Works 6.3, Recommended Standards for Water Works 6.4.1]</p>
T-23	<p>Additional Limitations: Provisions shall be made for pump alternation. [Recommended Standards for Water Works 6.6.5]</p>

Distribution-Major Construction

Bath Co Water District
Facility Requirements

Activity ID No.: APE20040001

Narrative Requirements:

Additional Limitations:

Condition No.	Condition
T-24	<p>Additional Limitations: Pumps shall</p> <ol style="list-style-type: none">have ample capacity to supply the peak demand against the required distribution system pressure without dangerous overloading,be driven by prime movers able to meet the maximum horsepower condition of the pumps,be provided readily available spare parts and tools, andbe served by control equipment that is properly protected against temperatures to be encountered. [Recommended Standards for Water Works 6.3]
T-25	<p>Additional Limitations: Pumps, their prime movers and accessories shall be controlled in such a manner that they will operate at rated capacity without dangerous overload. [Recommended Standards for Water Works 6.5]</p>
T-26	<p>Additional Limitations: Pump stations shall be located or controlled so that a bypass is available. [Recommended Standards for Water Works 6.4.e]</p>
T-27	<p>Additional Limitations: Pump stations shall contain indicating and totalizing metering of the total water pumped. Each pump shall have</p> <ol style="list-style-type: none">a standard pressure gauge on its discharge line anda compound gauge on its suction line. <p>Each pump should have a means for measuring the instantaneous volume per time discharge. [401 KAR 8:100 Section 1(7), Recommended Standards for Water Works 6.4.2, Recommended Standards for Water Works 6.6.3]</p>
T-28	<p>Additional Limitations: Pumps shall be adequately valved to permit satisfactory operation, maintenance and repair of the equipment. Each pump shall have a positive-acting check valve on the discharge side between the pump and the shut-off valve. [Recommended Standards for Water Works 6.6.1]</p>
T-29	<p>Additional Limitations: Piping for pumps shall, in general,</p> <ol style="list-style-type: none">be designed so that the friction losses will be minimized,not be subject to contamination,have watertight joints,be protected against surge or water hammer,be provided with restraints where necessary, anda) be such that each pump has an individual suction line orb) be manifolded such that the lines insure similar hydraulic and operating conditions. [Recommended Standards for Water Works 6.6.2]

Distribution-Major Construction

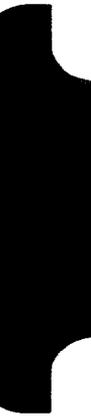
Bath Co Water District
Facility Requirements

Activity ID No.: APE20040001

Narrative Requirements:

Additional Limitations:

Condition No.	Condition
T-30	<p data-bbox="508 1619 533 1871">Additional Limitations:</p> <p data-bbox="541 716 607 1871">To ensure continuous service when the primary power is interrupted, power supplied to pump stations shall be</p> <ul data-bbox="616 1115 649 1871" style="list-style-type: none"><li data-bbox="616 1409 640 1871">a) from at least 2 independent sources or<li data-bbox="649 1115 674 1871">b) from a primary source with a standby or auxiliary source provided. <p data-bbox="682 237 702 1871">If standby power is provided by onsite generators or engines, the fuel storage and fuel line must be designed to protect the water supply from contamination. [Recommended Standards for Water Works 6.6.6]</p>



**PROPOSED OPERATING BUDGET
EXISTING AND NEW USERS**

Year Ending 2005

Operating Income:

Water Sales	\$ 1,153,703
Disconnect/Reconnect/Late Charge Fees	\$ 33,360
Other (Describe) Tap Fees & Misc	

Less Allowances and Deductions

Total Operating Income \$ 1,187,063

Operation and Maintenance Expenses:
(Based on Uniform System of Accounts prescribed by National
Association of Regulatory Utility Commissioners)

Source of Supply Expense	\$ 540,275
Pumping Expense	\$ 35,953
Water Treatment Expense	\$ -
Transmission and Distribution Expense	\$ 220,751
Customer Accounts Expense	\$ 109,680
Administrative and General Expense	\$ 104,941

Total Operating Expenses \$ 1,011,600

Net Operating Income \$ 175,463

Non-Operating Income:

Interest on Deposits
Other (Identify)

Total Non-Operating Income \$ -

Net Income \$ 175,463

Debt Repayment:

RUS Interest	\$ 27,700
RUS Principal	\$ 75,135
Non-RUS Interest	\$ 10,000
Non-RUS Principal	\$ 2,380

Total Debt Repayment \$ 115,215

Balance Available for Coverage \$ 60,248